Cook, E., Willis, K., and Lozano, M. (2003). Alien Invasion. A new non-native invasive species on the west coast of Scotland. *SAMS Newsletter* 28:12
Harrison, H.J. (1944). Caprellidea (Amphipoda, Crustacea). *Synopses of the British Fauna*. No. 2. pp. 1-27. The Linnean Society of London.
Oban Times (15 July 2004). Alien species comes under the microscope at Dunstaffnage.
Platvoet,D., De Bruyne, R.H., and Gmelig Meyling, A.W. (1995). Description of a new Caprella- species from the Netherlands: *Caprella macho* nov.spec. (Crustacean, Amphipoda, Caprellidea). *Bulletin Zoologisch Museum*, 15(1), 1-4.
Scotland on Sunday (7 September 2003). Shrimp invasion poses threat to native shellfish.
Sunday Times (11 april 2004). Alien invasion is wiping out native sea life.
Tierney,T.D., Kane, F., Naughton, O., Kennedy, S.O., Donohoe,P., Copley, L., Jackson, D. (2004). On the occurrence of the caprellid amphipod, *Caprella mutica* Schurin 1935, in Ireland. *Irish Naturalists Journal*. 27(11), 437-439.
Willis, K.J., Cook, E.J., Lozano-Fernandez, M. and Takeuchi, I. (2003). Aquaculture related introductions of the caprellid amphipod *Caprella mutica*. *6th international conference on the biology and control of sealice* (Poster presentation & Abstract). St Andrews, Canada, 1-4 July 2003.
Willis, K.J., Cook, E.J., Lozano-Fernandez, M. and Takeuchi, I. (2004). First record of the caprellid amphipod, *Caprella mutica*, for the UK. *Journal of the Marine Biological Association of the UK*. 84:1027-1028.

A LESSER WEEVER FISH *ECHIICHTHYS VIPERA* IN THE CLYDE ESTUARY

Myles O'Reilly
Scottish Environment Protection Agency
Redwood Crescent
East Kilbride, Glasgow G74 5PP
myles.oreilly@sepa.org.uk

The Lesser Weever (*Echiichthys vipera*) with its venomous dorsal spines is well known as a hazard to bathers and surfers in southern Britain. It is less common further north but occurs in coastal areas along the north coast of Wales, the Liverpool Bay area and up into the Solway Firth (Parker-Humphreys, 2004). They appear to like sandy estuaries and are very common in the Ribble Estuary in Lancashire (Steve Coates, Environment Agency, *pers. comm.*). They feed on a variety of small crustaceans (Vasconcelos *et al.*2004).

The Scottish Environment Protection Agency SEPA (and its predecessor the Clyde River Purification Board) have undertaken assessment of the fish populations in the Clyde Estuary for over 20 years (see Henderson & Hamilton, 1986). During routine beam trawling on 25th May 2004 a Lesser Weever was caught between Crannog and Milton, just west of the Erskine Bridge. The juvenile fish, about 6cm long, was transported alive to the SEPA lab at East Kilbride for closer examination in an aquarium, before being returned to the estuary the following day. It possessed the characteristic oblique mouth, top set eyes and the prominent black first dorsal fin, as well as the typical yellowish tail fin and brown-mottled flanks with a light violet sheen (Dipper, 1987).

Lesser Weevers were described as "very rare" in the Clyde Sea Area by Bagenal, (1965) although Haliday (1969) recorded juveniles around 1.5-2cm long netted in Kames Bay, Millport. Since then they have periodically turned up in Kames Bay and there have been occasional stinging incidents there and on the Ayrshire coast (Jim Atkinson, University Marine Biological Station Millport, *pers. comm.*). It seems likely that moderate numbers are present at all times but the coldness of Scottish waters means few bathers are likely to come in contact with the fish. As the fish prefer shallow sublittoral waters the vulnerable time is paddling at low water. One member of SEPA's staff remembers being stung by a weever fish, as a boy in 1971 at Glasnacardoch Beach (near Mallaig). He subsequently captured and killed the fish. This was before he became more "environmentally aware"! (Pat Duffy, SEPA, *pers. comm.*).

The occurrence of a juvenile Lesser Weever in the Clyde Estuary does appear to be unusual and suggests that a population of adults may be present nearby. However, monitoring of the estuarine fish communities between Dumbarton and Bowling (and further down the estuary at Pillar Bank) has been carried out four times a year since 1979 and no Lesser Weevers have ever been recorded. The nearest record of another Lesser Weever appears to be a specimen held by Glasgow Museums trawled between Dunoon and Innellan in 1976 (Richard Sutcliffe, Glasgow Museums, *pers. comm.*). It is possible that distributions of some estuarine fish species may be shifting in response to environmental changes - whether these be localised water quality improvements, sedimentary changes or perhaps Global warming (Smith, 2002, Hiscock *et al.*, 2004) - but it is too early to say whether the appearance of the Lesser Weever in the estuary is indicative of any trend.

The Scottish Association for Marine Science (SAMS) has carried out annual fish surveys on a number of shores in western Scotland between 2002 and 2005 (Mike Burrows, *pers. comm.* 2005). Lesser Weevers were caught in NW Scotland at Mellon Charles, Firemore, and Ganavan, near Oban at Tralee and Ganavan, and in Lochs Sween and Coalisport, and at Tayinloan on the Kintyre peninsula. In the Firth of Clyde area they were caught on the Kintyre peninsula at Skipness and Carradale and on the Ayrshire coast at Ayr and Girvan. The numbers captured were usually no more than 2-3 per survey though at Firemore and Gairloch up to 13 and 18 respectively were recovered. Overall, between 20 and 30 were

captured per annum with 37 landed in 2005. However, there is no evidence of any increasing trend and press reports (Brown, 2005) that the Lesser Weevers were undergoing a population "explosion" are quite misleading.

REFERENCES

Bagenal, T.B. (1965). The Fauna of the Clyde Sea Area. Fishes. Scottish Marine Biological Association, Millport. 38 pp.

Brown, A. (2005). Paddlers in peril as poisonous weever fish hit the beach. *The Scotsman*, 6 August 2005.

Dipper, F. (1987). British Sea Fishes. Underwater World Publications Ltd., London. 194pp.

Halliday, R.G. (1969). Rare fishes from the Clyde Sea Area. *Journal of Natural History* 9, 309-320.

Henderson, A.R. & Hamilton, J.D. (1986). The status of fish populations in the Clyde Estuary. *Proceedings of the Royal Society of Edinburgh* 90B, 157-170.

Hiscock, K., Southward, A., Titley, I., & Hawkins, S. (2004). Effects of changing temperature on benthic marine life in Britain and Ireland. *Aquatic Conservation: Marine And Freshwater Ecosystems* 14, 333-362.

Parker-Humphreys, M. (2004). Distribution and relative abundance of demersal fishes from beam trawl surveys in the Irish Sea (ICES Division VIIa) 1993-2001. *Science Series Technical Report* No.120, CEFAS Lowestoft, 68 pp.

Smith, P. (2002). Unusual Summer Visitors to the Clyde Sea Area. *University Marine Biological Station Millport, 32nd Annual Report 2001-2002*, pp.4-5.

Vasconcelos, R., Prista, N., Cabral, H., Costa, M.J. (2004). Feeding ecology of the Lesser Weever, *Echiichthys vipera* (Cuvier, 1829), on the western coast of Portugal. *Journal of Applied Ichthyology*, 20 (3), 211-216.